ORIGINAL

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

Cost Models in Universal Service Notice of Proposed Rulemaking	)))	CC Docket No. 96-45 DA 96-1094

MOTION FOR LEAVE TO FILE COMMENTS OUT OF TIME

Sprint Corporation ("Sprint") respectfully requests leave to file the attached Comments, which were due on Friday, August 9, 1996, out of time.

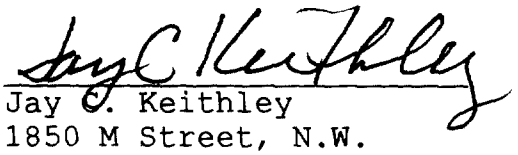
Due to computer communications transfer problems between Sprint's Westwood, Kansas headquarters and its Washington, D.C. office, the attached comments could not be relayed and edited in a timely manner.

It is believed that no party would be adversely affected by grant of this motion since the Commission's July 10, 1996, Public Notice in this matter does not provide for reply comments.

Accordingly, Sprint respectfully requests leave to file the attached comments in this important matter out of time.

Respectfully submitted,

SPRINT CORPORATION



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August 12, 1996

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

Cost Models in	)	
Universal Service Notice	)	CC Docket No. 96-45
of Proposed Rulemaking	)	DA 96-1094

COMMENTS

Sprint Corporation ("Sprint") hereby files comments in the Commission's Public Notice[1], seeking further comment on the four cost models in the universal service Notice of Proposed Rulemaking.[2]

BACKGROUND

In order for competition to take root in the local exchange telephone market, a fair and equitable method must be implemented to fund and distribute support to local exchange customers who live in areas of the United States where the cost of providing service is so great that the price of service is beyond an affordable level for most people. This funding and distribution process must support competitive entry into these areas by providing a level of support that makes serving broad geographic areas attractive to numerous telecommunications service providers. The methodology must be robust and flexible enough to appropriately deal with geographic areas that encompass both low cost and high cost areas, as is found in most small and medium sized cities. Sprint believes that the Benchmark Cost

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[1]Public Notice, July 10, 1996.
[2]Federal-State Joint Board on Universal Service, Notice of Proposed Rulemaking and Order Establishing Joint Board, CC Docket No. 96-45, FCC 96-93 (released March 8, 1996).

Model ("BCM2"), developed by Sprint and US WEST, provides the means to accomplish this task.

Sprint strongly believes the use of a national benchmark rate in determining affordability provides the Commission with the ability to assure fair treatment to all consumers of basic residential telephone services. Through the adoption of a national benchmark rate based at least in part on a reasonable proxy model, the Commission is better able to establish a fair, reasonable and competitively neutral benchmark. Sprint supports use of the BCM2 for this purpose.

As it has previously said[3], Sprint recommends the Joint Board adopt the BCM2 to determine the economic cost of providing basic universal service. There are four tests that any proxy model needs to pass to be considered for use in this or any other proceeding. First, a model needs to produce costs that an efficient service provider would incur in building and operating a network for providing basic universal telephone service. Second, the model must develop costs at a level that aggregates households by common density and geographic characteristics to properly identify high and low cost areas. Third, the model must be totally independent of any service providers' costs or ability to influence model results, i.e., totally based on public information. And fourth, the model must be totally in the public domain and have been subject to scrutiny and comment by all interested parties.

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[3]In the Matter of Federal-State Joint Board on Universal Service, CC Docket 96-45, Sprint's Comment's on Specific Questions, filed August 2, 1996.

COSTS FOR AN EFFICIENT SERVICE PROVIDER

The BCM2 assumes all plant facility requirements are placed at a single point in time. All facilities are created as if the entire country is a new service area. Therefore, the BCM2 reflects the costs a telephone engineer faces installing new service to existing population centers.

BCM2 is a competitively neutral, geographically-based, high-level engineering model that matches engineering practices that would be used today by an incumbent LEC or a new market entrant. BCM2 is capable of using a variety of geographical units up to, but not including, the wire center or exchange. The basic geographic units selected for the field version of the model are Census Block Groups ("CBGs"), as designated by the U.S. Bureau of the Census. There are over 226,000 CBGs in the United States [4] The basic data provided by the Census Bureau are the geographic boundaries of the CBG, the geographic center (centroid) of the CBG, the CBG area in square miles, and the number of households in the CBG. In addition to the Census Bureau data, terrain information from the U.S. Department of Agriculture, Soil Conservation Service (S.C.S.) is developed by CBG. This information includes data which impacts the cost of placing telephone plant in service. The terrain data includes water table depth, depth to bedrock, hardness of the bedrock, surface soil texture, and the minimum and maximum slope of the terrain. Another data item developed by CBG is an estimate of the number of business lines, which is developed by multiplying a state by state ratio of business

[4] BCM2 is capable of using any small geographic unit, such as a census block or the "grid" utilized by the Cost Proxy Model (CPM) developed by Pacific Telesis and INDETEC.

lines per employee to the number of employees per CBG from a Winter 1996 Dunn & Bradstreet data base.

The BCM2 process begins with the development of the input data for the model. It starts with the existing central office locations throughout the country as found in Bellcore's Local Exchange Routing Guide (LERG). This data is input into a geographic information system where each CBG is associated with the nearest central office. In a competitive environment, existing exchange boundaries are no longer appropriate. Likewise, if terrain exceptions are identified that precludes the nearest office assumption, it is a simple matter to change the data input file. It has no effect on the BCM2 model itself. Once all CBGs are associated with central office locations, the associated distances, angles, CBG units and terrain information are merged into the data input file for the model. These data files, by state, are then entered into the BCM2. This basic input information allows the BCM2 to design a local exchange network utilizing the standard tree and branch topology.

AGGREGATION OF HOUSEHOLDS

The advantages clearly weigh in favor of using Census Block Groups (CBGs) as the geographic area in projecting costs. As Sprint explained in response to Southwestern's objection to the use of CBGs:

> Costs to serve end user customers may vary greatly over an exchange or wire center or any other large geographic area due to terrain conditions and the distance an end user may live from the serving central office. Sprint believes that high-cost support should be available to cover the cost of serving end users that live in specifically defined areas where the cost to serve them is greater than what would be considered affordable and reasonably comparable to rates charged for similar services in urban areas. However, even in very small communities, there are some areas where the cost to serve subscribers

> are reasonable compared to urban areas, and there are other areas that have cost many times that of urban areas. Accordingly, determining support at the smaller CBG level better targets support to specifically defined high-cost areas by eliminating some of the disparities in costs that can occur with a larger area. Additionally, the use of CBGs eliminates the implicit subsidy, inherent with a system where costs would be averaged throughout an entire exchange or wire center, of one group of subscribers by another.[5]

INDEPENDENT OF SERVICE PROVIDERS' COSTS

The majority of data for input to BCM2 are taken from publicly available data. The only minor exception is due to default input file cells that were developed from individual cable contract placement and switch manufacturer proprietary data that were averaged together to create some of the unit prices for the data input files. As stated earlier in this document, the Census Block Groups are as designated by the U.S. Bureau of the Census and terrain data is taken from the S. C. S. Prices for cable and circuit equipment are taken from supplier information, and expense and tax information is developed from ARMIS data. The use of publicly available data insures that all service providers will be treated equally when serving areas where support is required to maintain prices that are reasonable and affordable to the public, thus paving the way for competition into areas that might otherwise not be considered profitable to serve.

AN UPDATED MODEL

The original Benchmark Cost Model ("BCM"), as filed on September 12, 1995 in the FCC's CC Docket No. 80-286 (USF Proceeding), was developed by joint sponsors consisting of Sprint, NYNEX, MCI, and US WEST in response to the

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[5]Sprint Reply Comments, p. 13

FCC's expressed interest in considering a model which develops "proxy" costs for the provision of basic telephone service at the CBG level. Compared to the local loop models developed by RAND, MCI/Hatfield and U S West's earlier model that developed proxy costs for CBGs, the BCM was a major improvement.

After seeking public comments and industry input and suggestions, Sprint, with the assistance of US West created and filed on July 3, 1996 the BCM2. BCM2 was developed to address criticisms contained in comments filed in CC Docket No. 96-45 (Federal Joint Board on Universal Service). With the creation of BCM2, the needed flexibility to easily accommodate the addition of services to the list of universal services or new technology became available. It significantly enhances the engineering and costing assumptions contained in the original version. All underlying cost factors and user prices are now user inputs. The output cost levels of BCM2 are primarily a function of the easily adjustable user inputs.

Sprint and its partners in creating the BCM and BCM2 have worked diligently to provide copies of its models to the public for use, review and criticism. In addition, Sprint and its partners have participated in numerous workshops and presentations within the last 10 months to provide information and to receive comments on the BCM and BCM2.

BCM2 is built with the flexibility to accommodate changes in the industry, the services provided, and costs. BCM2 determines costs by developing forward-looking costs of facilities and expenses needed to universally provide only those services defined as basic. These costs represent what any efficient competing company would incur in building a network to provide these services. BCM2 is

capable of including any network investment or expense required to provide access to any services which are identified.

COMPARISONS TO OTHER MODELS

BCM and BCM2 are capable of providing proxy costs for all areas. In contrast to the CPM and Hatfield models, the BCM2 has been used to run costs for all 50 states and the District of Columbia. Insular areas such as Micronesia and the Virgin Islands will be filed by the end of August, 1996. The CPM and the Hatfield models have only been run for a few states or portions of a state.
Due to time limitations, primarily caused by the short time that both the Hatfield and Cost Proxy Models have been available for public scrutiny, Sprint has not been able to test the HM and CPM as thoroughly as it would like. In contrast, the BCM has been on the public record since September, 1995.

HATFIELD MODEL ("HM")

The HM that is on the record at this time is impossible to test because it is in four parts, only two of which have been supplied by Hatfield. Until Hatfield can produce the two remaining portions of its study with reasonable documentation the HM cannot be used as a proxy model in Sprint's view.

In addition, in Sprint's opinion, no model should be considered in this proceeding until data has been produced for every state. Until that time, most parties in this proceeding will not have the ability to review results that impact them.

COST PROXY MODEL ("CPM")

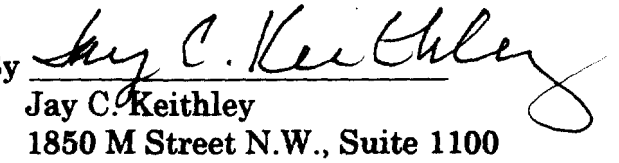
From Sprint's view, it is not clear that the CPM can be easily run for all states. The specialized data necessary to develop the network portion of the model will not be readily available for most states. The idea of using a grid system to better geographically allocate population in sparsely populated areas seems to have merit. Like the HM, the CPM has not produced results for all states, which makes it impossible for many parties to evaluate the impact on their respective areas.

CONCLUSION

To determine the best model available or best combination of models, Sprint recommends that the Commission pursue additional investigations. BCM2 and CPM authors are currently discussing the option of combining their models by using the best attributes of both. Sprint supports use of BCM2 but has been and is open to continuing constructive input from industry participants to create a proxy cost model which will most efficiently determine costs for universal services.

Respectfully submitted,

SPRINT CORPORATION

By 

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August 12, 1996

CERTIFICATE OF SERVICE

I, Melinda L. Mills, hereby certify that I have on this 12th day of August, 1996, sent via U.S. First Class Mail, postage prepaid, or Hand Delivery, a copy of the foregoing "Comments of Sprint Corporation" in the Matter of Universal Service Notice of Proposed Rulemaking, CC Docket No. 96-45, filed this date with the Acting Secretary, Federal Communications Commission, to the persons on the attached service list.

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